PVA Risk Assessment Worksheet: MSO Tampa Commercial Parasail Vessel "Developmental Team"

STEP #1	**Company Name:**	**Commercial Parasail Vessels- Western Florida, MSO Tampa AOR**
	Vessel (s) Name:	**Parasail Vessel Safety Developmental Team**
	Phase of Operation Assessed:	**Parasail Ride (from time chute is inflated, riders airborne, to deflated)**

STEP #2	**Participant Name:**	**Function/ Title/ Organization**
	Mark Bahr	Marco Island Ski & Watersports Inc., Pres; PS Manufacturer
	Ron Hagerman	Marco Island Ski & Watersportrs Inc., VP/GM; PSOperator
	Chris Abbott	Custom Chutes Inc., Pres; PS Manufacturer
	Jesse Pariseau	Premium Boat Co., GM; PS Manufacturer
	Kiven Hopper	Parasail City; Pres; PS Operator
	Matt Murphy	Cortez Parasail; Capt; PS Operator
	Allen Fawe	Cortez Parasail; GM/ Capt; PS Operator
	Daryl Konecy	Fun & Sun Parasail; Owner/ Pres; PS Operator
	Darius Bors	USCG, MSD West Palm Beach; Marine Inspector/ IO
	J.M. Shea	USCG Aux, MSO Tampa, IO
	J. Lilburn	USCG Aux, MSO Tampa, IO
	Scott Muller	USCG, MSO Tampa, SIO

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STEP #3	**STEP #4**		**STEP #5**		**STEP #6**
Hazard Description	**Frequency Rating**		**Impact Rating**		**Relative Risk Score**
1. Towline Separation (throughout entire parasail system)	4	+	5	=	9
a. Knot braking		+		=	
b. Line braking		+		=	
c. Line Failure at the winch		+		=	
• (shock loading a line- occurs during: poor response to free spooling, during retrieving and launching (short line distance)) • Problems with line; damage, poor condition, old ….) • Drag on line increases with greater length…) • Line Degrades from salt-water intrusion		+		=	
		+		=	
2. Passenger Dipping:	2	+	3	=	5
a. Other factors; boat traffic		+		=	
b. Riders make contact with each other during dip…		+		=	
c. There are advantages to pass dipping.. Operator can judge wind speed and other factors for boat landing..		+		=	
		+		=	
3. Mechanical Failures	4	+	5	=	9
a. systems on board, vsl, engines, drive, winches ….		+		=	
		+		=	
4. Operations in Un-Sat Wx and Sea conditions, Location, etc. (operating when they should not- why stay open?)	3	+	5	=	8
		+		=	
5. Collisions; proximity of vsls, near misses etc.	2	+	5	=	7
6. Parasail Equipment Failure; but not towline	1	+	5		6

FREQUENCY RATING

1	**Remote = Might occur once in a lifetime.**
2	**Occasional = Might occur every five years.**
3	**Likely = Might occur every season or year.**
4	**Probable = Might occur monthly.**
5	**Frequent = Might occur daily or weekly.**

IMPACT RATING

1	**Negligible = Injury w/ no first aid, no cosmetic vsl damage**
2	**Minor = Injury req first aid, cosmetic vsl damage**
3	**Significant = Injury req more than first aid, vsl damage**
4	**Critical = Severe Injury, major vsl damage**
5	**Catastrophic = Loss of life, loss of Vsl**

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<table>
<tr><th>Focus Hazards
(top 3 from Step #6)</th><th>STEP #7:
Countermeasures
(All Inclusive for Focus Hazards)</th><th>STEP #8:
Estimate of
Effectiveness</th><th></th><th>STEP #9:
Cost
Estimates</th><th></th><th>STEP #10:
Overall Score</th></tr>
<tr><td>A. Towline Separation (throughout entire parasail system)</td><td>1. Mandatory installment of the latest (newest generation of winch systems), that being a winch system with a hydraulic brake.</td><td>2</td><td>÷</td><td>2</td><td>=</td><td>1</td></tr>
<tr><td>B. Mechanical Failures</td><td>2. Length of Line: Flight Height Standards;
• Maximum altitude of 500 feet above water level, or not to exceed a towline angle of 41 degrees (average), or as required by FAA regs.
• Max of 900 feet of line allowed on towline spool.</td><td>2</td><td>÷</td><td>1</td><td>=</td><td>2</td></tr>
<tr><td>C. Operations in Un-Sat Wx and Sea conditions</td><td>3. Towline Standards; Strength of Line
• Min Tensile Strength: (4,800 lbs)
• Max Tensile Strength: (10,000 lbs)</td><td>2</td><td>÷</td><td>1</td><td>=</td><td>2</td></tr>
<tr><td></td><td>4. Distance off-shore, off-any object; Operational Parameters
• 3 x's Line length from any structure
• At no times shall a parasail vessel's operator allow a canopy to pass within the following distances from the shore while an onshore wind is present:
•
<table>
<tr><th>Wind Speed (MPH)</th><th>Dist. Off Shore (Ft)</th></tr>
<tr><td>0-5</td><td>600</td></tr>
<tr><td>5-10</td><td>1,000</td></tr>
<tr><td>11-15</td><td>3 x's towline length</td></tr>
<tr><td>16-20</td><td>4 x's towline length</td></tr>
</table></td><td>3</td><td>÷</td><td>1</td><td>=</td><td>3</td></tr>
<tr><td></td><td>5. Towline/ Winch Spool Connection:
• Must be attached via some knot.</td><td>3</td><td>÷</td><td>1</td><td>=</td><td>3</td></tr>
</table>

	6. Maintenance of Line: • Provide Guidance for Industry (items to look for) • Evidence of Fray's, flat spots, etc. • Line must be changed at least once per-year (mandatory) • Towline must be kept clean and dry.	**3**	**÷**	**2**	**=**	**1.5**
	7. Towline Roller Systems: • Must have one with fairlead's, good working condition. • Must have a line-leveler system	**3**	**÷**	**2**	**=**	**1.5**
	8. End of line (Towline/ Yoke) Attachment • A minimum of 12" shall be trimmed from the towlines bitter end every 7 days.	**3**	**÷**	**2**	**=**	**1.5**
	9. Mark end of line closest to the tow winch spool to indicate last 50 and 100 feet. This will help warn the operator that the line is almost completely paid out off the spool.	**2**	**÷**	**1**	**=**	**2**
	10. Operational Logbooks that capture: • Daily Weather (AM and PM notations?) • Equipment Maintenance: (P/S and Vsl) o Daily Equipment Checks, if damaged or questionable conditions are noted, the equipment shall be taken to a qualified repair facility. o Maintenance of P/S and Vsl shall be in accordance with the Manufactures Manual (operator must have manuals readily available) • Training Drills	**2**	**÷**	**1**		**2**
	11. Operational Procedures A (Written): • Recovery of persons and parasail riders from the water. • Drills to be conducted o Man-overboard	**1**	**÷**	**2**		**.5**

	○ Loss of engine or winch power ○ Line Partings ○ High Wind Situations ▪ Note: we must create the right standards operators must follow. • Passenger/ rider briefs prior to flights.					
	12. Operational Area and Procedures Identification: • (Written Company Policies) • Distance off-shore or from objects • Max ride heights • Line Length • Wx and Sea conditions w/ 4 foot seas max. • (PAPO): 1. No vsl shall be operated in the following conditions: ▪ Wind is excess of 20 mph sustained. ▪ Wind gust exceed the sustained wind by more than 5 mph. ▪ When vsl is not capable of making forward way with forward winch engagement and passenger in tow. ▪ When the passenger(s) in tow will not begin to sufficiently descend when forward way has been paused.	**3**	**÷**	**2**	**=**	**1.5**
	13. Training Programs: • Deckhands shall be cross trained to at least be able to take over for the captain in an emergency to call for help, or maneuver the vessel to a safe location and to terminate the flight safely. • OJT: Competency Testing/ exam, (PAPO) • Written Training Program: (PAPO)	**3**	**÷**	**3**	**=**	**1**

	• Must create standards to give operators guidance.					
	14. Vsls must have a VHF Radio	**1**	**÷**	**1**		**1**
	15. Operators must be able to assess weather conditions via any available means: TV, Internet, radios, etc…	**3**	**÷**	**1**		**3**
	16. Stowage of P/S Equipment: • Equip stowed in proper container, or hung in locker on the dock, all gear must not be stowed in Engine compartment.	**1**	**÷**	**1**	**=**	**1**

Estimate of Effectiveness

1	**Low = No reduction in the relative risk score.**
2	**Medium = Reduction of the relative risk score by one or two points.**
3	**High = Reduction of relative risk score in excess of two points.**

Cost Estimate

1	**Low = Low or no cost**
2	**Medium = Approximately equal to the revenue received on a good day.**
3	**High = Greater than the revenue received during a week or more of operation.**

STEP #10 (Continued): Choose the countermeasures with the highest Overall Score.

Countermeasure	Overall Score
Distance off-shore, off-any object; Operational Parameters	**3**
Towline/ Winch Spool Connection:	**3**
Operators must be able to assess weather conditions via any available means: TV, Internet, radios, etc…	**3**
Length of Line: Flight Height Standards;	**2**
Towline Standards; Strength of Line	**2**
Mark end of line closest to the tow winch spool to indicate last 50 and 100 feet.	**2**
Operational Logbooks	**2**